What is Claimed is:

1. A transparent composite comprising:
   (a) a first layer comprising a transparent substrate polymer material; and
   (b) a second layer comprising a transparent fluorocarbon polymer film;
   wherein the second layer is bonded to the first layer.

2. The transparent composite of claim 1 further comprising a transparent adhesive layer disposed between the first layer and the second layer.

3. The transparent composite of claim 1 wherein the first layer is a polycarbonate.

4. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent fluorocarbon polymer.

5. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[- CF_2 - CF_2 - CH_2 - CH_2 -]_n$.

6. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[- CF_2 - CF_2 - CH_2 - CH_2 -CH_2]_n$.

7. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[- CF_2 - CF_2 - CH_2 - \dot{C}H_2]_n$, where n is of a value such that the transparent fluorocarbon polymer has a density between 1.7 and 1.8 and has a tensile strength of between about 5,000 psi at 25°C and 7,000 psi at 25°C.

8. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[- CF_2 - CF_2 - CH_2 - CH_2]_n$, where n is of a value such that transparent fluorocarbon polymer has a density between 1.7 and 1.8 and has a tensile strength of between about 5,000 psi at 25°C and 7,000 psi at 25°C.

9. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[- CF_2 - CF_2 - CF_2 - CF(CF_3) -]_n$.

10. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[- CF_2 - CF_2 - CF_2 - CF(CF_3) -]_n$.

11. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[- CF_2 - CF_2 - CF(OC_3F_7) - CF_2 -]_n$.

12. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[- CF_2 - CF_2 - CF(OC_3F_7) - CF_2 -]_n$.

13. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[- CFCl - CF_2 -]_n$.

14. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[- CFCl - CF_2 -]_n$.

15. The transparent composite of claim 1 wherein the second layer comprises a transparent material having the formula $[- CF_2 - CFCl - CF_2 - CFCl -]_n$.

16. The transparent composite of claim 1 wherein the second layer consists essentially of a transparent material having the formula $[- CF_2 - CFCl - CF_2 - CFCl -]_n$.

17. The transparent composite of claim 1 wherein the first layer is flexible.

18. A chemical laboratory reaction enclosure having a transparent window, the transparent window being a transparent composite comprising:

(a) a first layer comprising a substrate polymer material; and

(b) a second layer comprising a transparent fluorocarbon polymer;

wherein the second layer is bonded to the first layer.

19. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer consists essentially of a transparent fluorocarbon polymer.

20. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer comprises a transparent material having the formula $[- CF_2 - CF_2 - CH_2 - CH_2 -]_n$.

21. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer consists essentially of a transparent material having the formula $[- CF_2 - CF_2 - CH_2 - CH_2]_n$.

22. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer comprises a transparent material having the formula $[- CF_2 - CF_2 - CH_2 - CH_2 -]_n$, where n is of a value such that the transparent fluorocarbon polymer has a density between 1.7 and 1.8 and has a tensile strength of between about 5,000 psi at 25°C and 7,000 psi at 25°C.

23. The chemical reaction laboratory reaction enclosure of claim 18 wherein the second layer consists essentially of a transparent material having the formula $[- CF_2 - CF_2 - CH_2 - CH_2 -]_n$, where n is of a value such that the transparent fluorocarbon polymer has a density between 1.7 and 1.8 and has a tensile strength of between about 5,000 psi at 25°C and 7,000 psi at 25°C.